

=====

Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2008; month=8; day=25; hr=15; min=42; sec=18; ms=527;]

=====

Application No: 09730329 Version No: 6.0

Input Set:**Output Set:**

Started: 2008-07-21 22:04:41.721
Finished: 2008-07-21 22:04:44.361
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 640 ms
Total Warnings: 67
Total Errors: 1
No. of SeqIDs Defined: 101
Actual SeqID Count: 101

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (23)

Input Set:

Output Set:

Started: 2008-07-21 22:04:41.721
Finished: 2008-07-21 22:04:44.361
Elapsed: 0 hr(s) 0 min(s) 2 sec(s) 640 ms
Total Warnings: 67
Total Errors: 1
No. of SeqIDs Defined: 101
Actual SeqID Count: 101

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

E 257

Invalid sequence data feature in <221> in SEQ ID (73)

SEQUENCE LISTING

<110> John, Varghese
Sinha, Sukanto
Tung, Jay

<120> BETA-SECRETASE ENZYME COMPOSITIONS AND METHODS

<130> 015270-006460US

<140> 09730329

<141> 2000-12-04

<150> US 60/168,854

<151> 1999-12-02

<160> 101

<170> PatentIn version 3.3

<210> 1

<211> 1503

<212> DNA

<213> Homo sapiens

<400> 1

atggcccaag cctgccttg gctcctgctg tggatgggcg cgggagtgtt gcctgccac	60
ggcaccagc acggcatccg gctgcccttg cgcagcggcc tggggggcgc cccctgggg	120
ctgcggctgc cccgggagac cgacgaagag cccgaggagc ccggccggag gggcagcttt	180
gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc	240
gtgggcagcc cccgcagac gctcaacatc ctggtggata caggcagcag taactttgca	300
gtgggtgctg ccccccacc cttcctgcat cgtactacc agaggcagct gtccagcaca	360
taccgggacc tccggaaggg tgtgtatgtg ccctacacc agggcaagtg ggaaggggag	420
ctgggcaccg acctggtgta catcccccat ggccccaacg tcaactgtgc tgccaacatt	480
gctgccatca ctgaatcaga caagtctctt atcaacggct ccaactggga aggcattctg	540
gggctggcct atgctgagat tgccaggcct gacgactccc tggagccttt ctttgactct	600
ctggtaaagc agaccacgt tcccaacctc ttctccctgc agctttgtgg tgctggcttc	660
ccctcaacc agtctgaagt gctggcctct gtcggaggga gcatgatcat tggaggatc	720
gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcggga gtggtattat	780
gaggtgatca ttgtgcgggt ggagatcaat ggacaggatc tgaaaatgga ctgcaaggag	840
tacaactatg acaagagcat tgtggacagt ggcaccacca accttcgttt gcccaagaaa	900

```

gtgtttgaag ctgcagtcaa atccatcaag gcagcctcct ccacggagaa gttccctgat    960
ggtttctggc taggagagca gctgggtgtgc tggcaagcag gcaccacccc ttggaacatt    1020
ttcccagtca tctcactcta cctaattgggt gaggttacca accagtcctt ccgcatacacc    1080
atccttccgc agcaatacct gcggccagtg gaagatgtgg ccacgtccca agacgactgt    1140
tacaagtttg ccatctcaca gtcatccacg ggcaactgta tgggagctgt tatcatggag    1200
ggcttctacg ttgtctttga tcgggcccga aaacgaattg gctttgctgt cagcgcttgc    1260
catgtgcacg atgagttcag gacggcagcg gtggaaggcc cttttgtcac cttggacatg    1320
gaagactgtg gctacaacat tccacagaca gatgagtcaa ccctcatgac catagcctat    1380
gtcatggctg ccatctgcgc cctcttcatg ctgccactct gcctcatggg gtgtcagtgg    1440
cgctgcctcc gctgcctgcg ccagcagcat gatgactttg ctgatgacat ctccctgctg    1500
aag                                                                    1503

```

```

<210>  2
<211> 501
<212> PRT
<213> Homo sapiens

```

```

<400>  2

```

```

Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
1           5           10           15

```

```

Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
          20           25           30

```

```

Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
35           40           45

```

```

Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
50           55           60

```

```

Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
65           70           75           80

```

```

Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
          85           90           95

```

```

Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
100          105          110

```

Tyr	Gln	Arg	Gln	Leu	Ser	Ser	Thr	Tyr	Arg	Asp	Leu	Arg	Lys	Gly	Val	115	120	125
Tyr	Val	Pro	Tyr	Thr	Gln	Gly	Lys	Trp	Glu	Gly	Glu	Leu	Gly	Thr	Asp	130	135	140
Leu	Val	Ser	Ile	Pro	His	Gly	Pro	Asn	Val	Thr	Val	Arg	Ala	Asn	Ile	145	150	155
Ala	Ala	Ile	Thr	Glu	Ser	Asp	Lys	Phe	Phe	Ile	Asn	Gly	Ser	Asn	Trp	165	170	175
Glu	Gly	Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Glu	Ile	Ala	Arg	Pro	Asp	Asp	180	185	190
Ser	Leu	Glu	Pro	Phe	Phe	Asp	Ser	Leu	Val	Lys	Gln	Thr	His	Val	Pro	195	200	205
Asn	Leu	Phe	Ser	Leu	Gln	Leu	Cys	Gly	Ala	Gly	Phe	Pro	Leu	Asn	Gln	210	215	220
Ser	Glu	Val	Leu	Ala	Ser	Val	Gly	Gly	Ser	Met	Ile	Ile	Gly	Gly	Ile	225	230	235
Asp	His	Ser	Leu	Tyr	Thr	Gly	Ser	Leu	Trp	Tyr	Thr	Pro	Ile	Arg	Arg	245	250	255
Glu	Trp	Tyr	Tyr	Glu	Val	Ile	Ile	Val	Arg	Val	Glu	Ile	Asn	Gly	Gln	260	265	270
Asp	Leu	Lys	Met	Asp	Cys	Lys	Glu	Tyr	Asn	Tyr	Asp	Lys	Ser	Ile	Val	275	280	285
Asp	Ser	Gly	Thr	Thr	Asn	Leu	Arg	Leu	Pro	Lys	Lys	Val	Phe	Glu	Ala	290	295	300
Ala	Val	Lys	Ser	Ile	Lys	Ala	Ala	Ser	Ser	Thr	Glu	Lys	Phe	Pro	Asp	305	310	315
Gly	Phe	Trp	Leu	Gly	Glu	Gln	Leu	Val	Cys	Trp	Gln	Ala	Gly	Thr	Thr	325	330	335

Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
340 345 350

Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
355 360 365

Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
370 375 380

Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
385 390 395 400

Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
405 410 415

Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
420 425 430

Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
435 440 445

Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala
450 455 460

Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp
465 470 475 480

Arg Cys Leu Arg Cys Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp
485 490 495

Ile Ser Leu Leu Lys
500

<210> 3
<211> 24
<212> DNA
<213> Homo sapiens

<400> 3
gagagacgar garccwgagg agcc

24

<210> 4
<211> 24
<212> DNA
<213> Artificial

<220>
 <223> Synthetic degenerate oligonucleotide primer

<400> 4
 gagagacgar garccwgaag agcc 24

<210> 5
 <211> 24
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic degenerate oligonucleotide primer

<400> 5
 gagagacgar garccwgaag aacc 24

<210> 6
 <211> 24
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic degenerate oligonucleotide primer

<400> 6
 gagagacgar garccwgagg aacc 24

<210> 7
 <211> 23
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic degenerate oligonucleotide primer

<400> 7
 agagacgarg arccsgagga gcc 23

<210> 8
 <211> 23
 <212> DNA
 <213> Artificial

<220>
 <223> Synthetic degenerate oligonucleotide primer

<400> 8
 agagacgarg arccsgaaga gcc 23

<210> 9

<211>	23	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic degenerate oligonucleotide primer	
<400>	9	
	agagacgarg arccsgaaga acc	23
<210>	10	
<211>	23	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic degenerate oligonucleotide primer	
<400>	10	
	agagacgarg arccsgagga acc	23
<210>	11	
<211>	23	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic degenerate oligonucleotide primer	
<400>	11	
	cgtcacagrt trtcaaccat etc	23
<210>	12	
<211>	23	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic degenerate oligonucleotide primer	
<400>	12	
	cgtcacagrt trtctacat etc	23
<210>	13	
<211>	23	
<212>	DNA	
<213>	Artificial	
<220>		
<223>	Synthetic degenerate oligonucleotide primer	
<400>	13	
	cgtcacagrt trtcacat etc	23

<210> 14
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 14
cgtcacagrt trtcgaccat etc 23

<210> 15
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 15
cgtcacagrt trtcaaccat ttc 23

<210> 16
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 16
cgtcacagrt trtctaccat ttc 23

<210> 17
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 17
cgtcacagrt trtcaccat ttc 23

<210> 18
<211> 23
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 18	
cgtcacagrt trtcgaccat ttc	23
<210> 19	
<211> 20	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<400> 19	
gaggggcagc tttgtggaga	20
<210> 20	
<211> 26	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<400> 20	
cagcataggc cagccccagg atgcct	26
<210> 21	
<211> 24	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<400> 21	
gtgatggcag caatgttggc acgc	24
<210> 22	
<211> 17	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<220>	
<221> misc_feature	
<222> (12)..(12)	
<223> n is a, c, g, or t	
<400> 22	
gaygargagc cngagga	17

<210> 23
<211> 17
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g, or t

<400> 23
gaygargagc cngaaga 17

<210> 24
<211> 17
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g, or t

<400> 24
gaygargaac cngagga 17

<210> 25
<211> 17
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (1)..(17)
<223> N = A, C, G, or T

<400> 25
gaygargaac cngaaga 17

<210> 26

```

<211> 15
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (1)..(15)
<223> N = A, C, G, or T

<400> 26
rttrtcnacc atttc
15

```

```

<210> 27
<211> 15
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (1)..(15)
<223> N = A, C, G, or T

<400> 27
rttrtcnacc atctc
15

```

```

<210> 28
<211> 17
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (1)..(17)
<223> N = A, C, G, or T

<400> 28
tcnaccatyt cnacaaa
17

```

```

<210> 29
<211> 17
<212> DNA
<213> Artificial

```

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (1)..(17)
<223> N = A, C, G, or T

<400> 29
tcnaccatyt cnacgaa 17

<210> 30
<211> 27
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 30
atattctaga gaygargagc cagaaga 27

<210> 31
<211> 27
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 31
atattctaga gaygargagc cggaaga 27

<210> 32
<211> 27
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 32
atattctaga gaygargagc ccgaaga 27

<210> 33
<211> 27
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 33	
atattctaga gaygargagc ctgaaga	27
<210> 34	
<211> 30	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<220>	
<221> misc_feature	
<222> (1)..(30)	
<223> N=A, C, G, or T	
<400> 34	
acacgaattc ttrtcnacca tytcaacaaa	30
<210> 35	
<211> 30	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<220>	
<221> misc_feature	
<222> (1)..(30)	
<223> N = A, C, G, or T	
<400> 35	
acacgaattc ttrtcnacca tytcgacaaa	30
<210> 36	
<211> 30	
<212> DNA	
<213> Artificial	
<220>	
<223> Synthetic degenerate oligonucleotide primer	
<220>	
<221> misc_feature	
<222> (1)..(30)	
<223> N = A, C, G, or T	
<400> 36	
acacgaattc ttrtcnacca tytccacaaa	30

<210> 37
<211> 30
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<220>
<221> misc_feature
<222> (1)..(30)
<223> N = A, C, G, or T

<400> 37
acacgaattc ttrtcnacca tytctacaaa 30

<210> 38
<211> 21
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 38
aagagcccgg ccggaggggc a 21

<210> 39
<211> 21
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 39
aaagctgccc ctccggccgg g 21

<210> 40
<211> 26
<212> DNA
<213> Artificial

<220>
<223> Synthetic degenerate oligonucleotide primer

<400> 40
agctcgttta gtgaaccgtc agatcg 26

<210> 41

<211> 26
 <212> DNA
 <213> Artificial

 <220>
 <223> Synthetic degenerate oligonucleotide primer

 <400> 41
 acctacaggt ggggtctttc attccc 26

 <210> 42
 <211> 2348
 <212> DNA
 <213> Homo sapiens

 <400> 42
 ccatgccggc ccctcacagc cccgcggga gcccgagccc gctgccagg ctggccgccc 60
 csgtgccgat gtagcgggct ccgcatccca gcctctcccc tgetcccggtg ctctgcggat 120
 ctcccctgac cgctctccac agcccggacc cgggggctgg cccagggccc tgcaggccct 180
 ggcgctctga tgcccccaag ctccctctcc tgagaagcca ccagcaccac ccagacttgg 240
 gggcaggcgc cagggacgga cgtgggccag tgcgagccca gagggcccga aggcgggggc 300
 ccaccatggc ccaagccctg ccctggtctc tgetgtggat gggcgcgga gtgctgctg 360
 cccacggcac ccagcacggc atccggctgc ccctgcgcag cggcctgggg ggcgcccccc 420
 tggggctgcg gctgccccgg gagaccgacg aagagcccga ggagcccggc cggaggggca 480
 gctttgtgga gatggtggac aacctgaggg gcaagtggg gcagggctac tacgtggaga 540
 tgaccgtggg cagccccccg cagacgctca acatcctggt ggatacaggc agcagtaact 600
 ttgcagtggg tgetgcccc cacccttcc tgcacgcta ctaccagagg cagctgtcca 660
 gcacataccg ggacctccg aaggggtgtgt atgtgcccta caccagggc aagtgggaag 720
 gggagctggg caccgacctg gtaagcatcc cccatggccc caacgtcact gtgcgtgcca 780
 acattgctgc catcactgaa tcagacaagt tcttcatcaa cggctccaac tgggaaggca 840
 tcctggggct ggcctatgct gagattgcca ggctgacga ctccctggag cttttctttg 900
 actctctggt aaagcagacc cacgttccca acctcttctc cctgcagctt tgtggtgctg 960
 gcttccccct caaccagtct gaagtgctgg cctctgtcgg agggagcatg atcattggag 1020
 gtatcgacca ctcgctgtac acaggcagtc tctggtatac acccatccgg cgggagtggg 1080
 attatgaggt gatcattgtg cgggtggaga tcaatggaca ggatctgaaa atggactgca 1140
 aggagtacaa ctatgacaag agcattgtgg acagtggcac caccaacctt cgtttgcca 1200

agaaagtgtt tgaagctgca gtcaaattcca tcaaggcagc ctctccacg gagaagttcc	1260
ctgatggttt ctggctagga gagcagctgg tgtgctggca agcaggcacc accccttgga	1320
acattttccc agtcattctca ctctacctaa tgggtgaggt taccaaccag tccttccgca	1380
tcaccatcct tccgcagcaa tacctgcggc cagtggaaga tgtggccacg tccaagacg	1440
actgttaciaa gtttgccatc tcacagtcac ccacgggcac tgttatggga gctgttatca	1500
tggagggtt ctacgttgtc ttgatcggg ccgaaaacg aattggcttt gctgtcagcg	1560
cttgccatgt gcacgatgag ttcaggacgg cagcggtgga aggcccttt gtcaccttg	1620
acatggaaga ctgtggctac aacattccac agacagatga gtcaaccctc atgaccatag	1